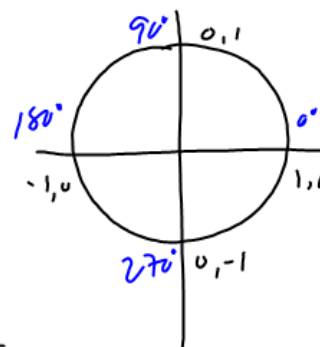
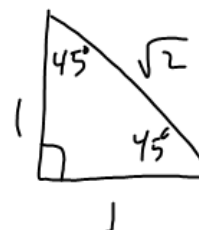
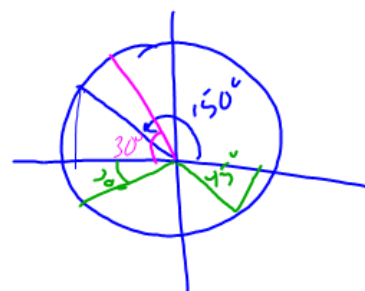


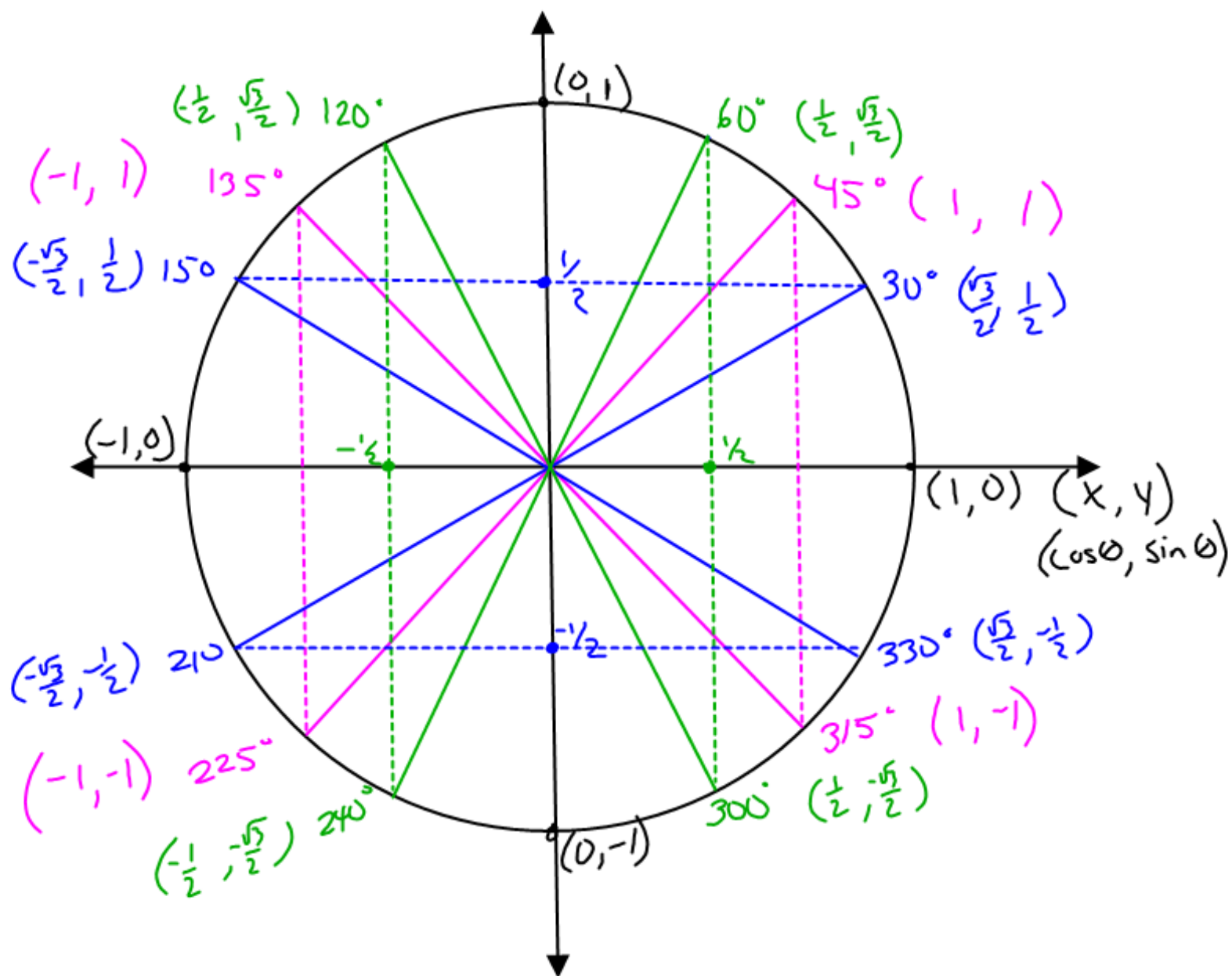
All angles are in degrees. Find exact answers and simplify and rationalize all solutions. NO CALCULATORS!

$$\begin{aligned}
 \sin(180) &= 0 \\
 \cos(60) &= \frac{1}{2} \\
 \sin(270) &= -1 \\
 \cos(150) &= -\frac{\sqrt{3}}{2} \\
 \tan(30) &= \frac{1}{\sqrt{3}} \Rightarrow \frac{\sqrt{3}}{3} \\
 \cos(45) &= \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2} \\
 \sin(120) &= \frac{\sqrt{3}}{2} \\
 \tan(0) &= 0 \\
 \tan(315) &= -1 \\
 \cos(210) &= -\frac{1}{2}
 \end{aligned}$$



$$\begin{aligned}
 \sin \theta &= y \\
 \cos \theta &= x
 \end{aligned}$$

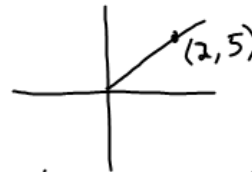




Test:

⇒ Find 6 Trig functions and  $\theta$  given

• A pt. on a graph



• A value of one trig funct.  $\cos \theta = \frac{\sqrt{3}}{2}$  in Quad IV

• Equation for terminal side  $x + y = 2$ , ex. 3 p. 22

⇒ Quadrantal  $\angle$ 's → understand

⇒ Reciprocal & cofunction identities  $\tan(3\theta + 4) = \frac{1}{\cot(4\theta - 1)}$

⇒ Angles of elevation & depression

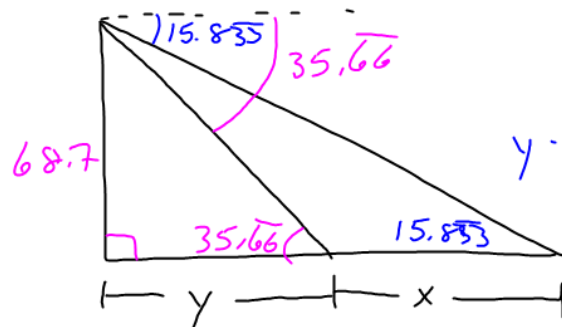
⇒ Prob. like ex. 4 p. 79, or 26 on 2.5

⇒ speed test

Ch. 1 Review p. 39 # 24-26, 27-32(4), 35, 36, 40, 41

Ch. 2 Review p. 88 # 1, 5, 11-19, 34, 52

#26 in 2.5



$$\tan 15.83 = \frac{68.7}{x+y}$$

$$\tan 35.67 = \frac{68.7}{y} \cdot y$$

$$\tan 35.67 \cdot y = 68.7$$

$$y = \frac{68.7}{\tan 35.67}$$

$$\tan 15.83 = \frac{68.7}{\left(x + \frac{68.7}{\tan 35.67}\right)} \cdot x + \frac{68.7}{\tan 35.67}$$

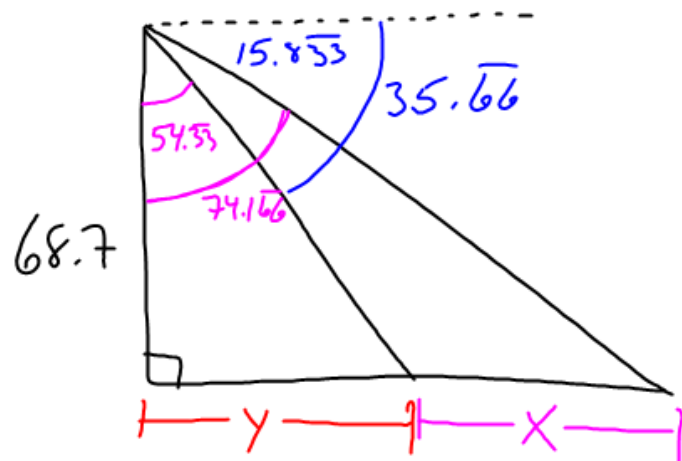
$$\frac{\tan 15.83 \left(x + \frac{68.7}{\tan 35.67}\right)}{\tan 15.83} = \frac{68.7}{\tan 15.83}$$

$$x + \frac{68.7}{\tan 35.67} = \frac{68.7}{\tan 15.83}$$

$$x = \frac{68.7}{\tan 15.83} - \frac{68.7}{\tan 35.67}$$

$$x \approx 147m$$

#26 in 2.5



Easier way

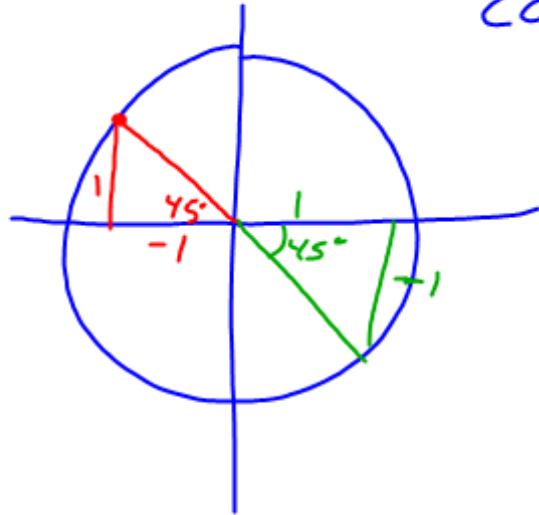
$$\tan 54.33 = \frac{y}{68.7} \quad y = 68.7 \tan 54.33$$

$$\tan 74.166 = \frac{x+y}{68.7} \quad x+y = 68.7 \tan 74.166$$

$$x = 68.7 \tan 74.166 - 68.7 \tan 54.33$$

$$x \approx 146.5 \text{ m}$$

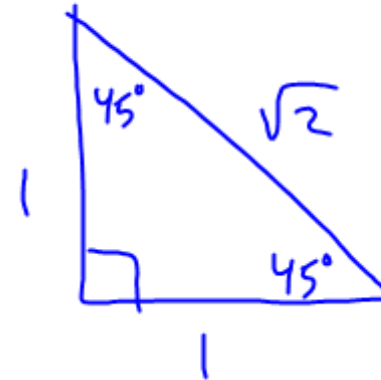
#18 p. 88



$$\cot \theta = -1 = \frac{x}{y}$$

$$\theta = 135^\circ$$

$$\theta = 315^\circ$$



$$\cot 45 = \frac{1}{1}$$